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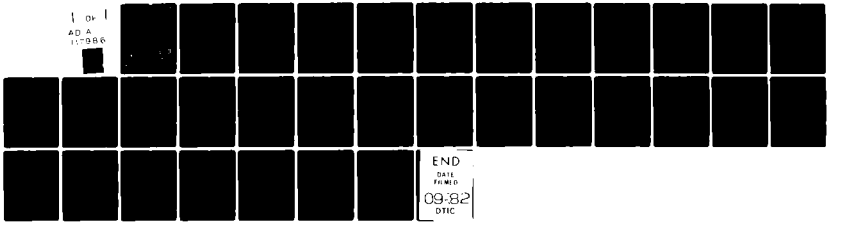

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INFLUENCES OF PERCEIVED SUPERIOR-SUBORDINATE COMMUNICATION PATTERNS ON SUBORDINATE PERFORMANCE

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Influences of Perceived Superior-Subordinate Communication Patterns on Subordinate Performance *

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Influences of Perceived Superior-Subordinate

Communication Patterns on Subordinate Performance

Abstract

Superior-subordinate communication patterns have been shown to influence subordinate satisfaction and performance. The present study of 184 military and civilian health care support personnel in five outpatient care facilities explored the potential importance of the point of initiation of leader-subordinate communication. Job and individual factors which affected this flow also were explored. A recursive model was developed to suggest probable causal paths. When tested by path analyses, certain revisions to the model appeared to be necessary. In general, leader-initiated and self-initiated communication appeared to reflect attempts to reduce role ambiguity and to exert only indirect influences on motivation and performance. Individual participation in decision-making, on the other hand, exerted the strongest influence on performance (via motivation) and also reduced ambiguity.

Influences of Perceived Superior-Subordinate Communication Patterns on Subordinate Performance

The recent literature has seen increasing numbers of articles addressing subordinate-superior communication patterns and their role in organizational functioning and individual performance (cf. Jablin, 1979). For example, O'Reilly (1977) reported that use of the immediate supervisor as an information source was correlated with lower decision error rates for county welfare eligibility workers while use of peers was unrelated to this index. In a parallel vein, Hansen and Muchinsky (1978) argued that the source of information was even more important than the type, although the type of information differs with the source. The supervisor is the primary source of referent information (what is needed to function in the job) while the job itself represents the primary source of appraisal information (how well the worker is actually functioning on the job). Similarly, Jablin (1979) noted that most superior-subordinate communication is task-oriented and supervisors are more likely to function as "production" rather than "maintenance" or "innovative" communication liaisons.

Such studies underscore the importance of supervisor-subordinate communication but provide only partial information about factors that affect subordinate willingness to use the supervisor as a valid information source. Further, studies of superior-subordinate communication often concentrate on the frequency and/or perceived value of the information conveyed, paying less attention to implications surrounding the source or point of initiation of that information exchange.

In regard to this latter issue, a variety of work or job characteristics might be expected to influence the frequency with which a particular individual initiated communication. For example, superiors are more likely to initiate communication with subordinates than vice versa (Jablin, 1979). Further, a

supportive leader and an atmosphere of mutual trust tend to increase the upward flow of information whereas the opposite conditions tend to restrict that flow (Jablin, 1979; O'Reilly, 1977). Similarly, some positions and some boundary spanning roles require more information (Allutto & Vredenbaugh, 1977; Morse & Wagner, 1978) and are likely to result in greater amounts of communication both up and down. Other job characteristics that may produce variations in the level of subordinate-initiated communication are role ambiguity and participatory decision-making. Role ambiguity might be expected to produce greater levels of upward-initiated communication in an attempt to reduce ambiguity while subordinate participation in decision-making tends to increase clarity (Quick, 1979), thus decreasing subordinate-initiated communication.

One might also expect individual factors to influence subordinate-initiated communication with the supervisor. For example, Johnston (1974) noted that some individuals see themselves as active agents in creating their work climate and use communication or their own actions to produce a more positive climate; others are more passive in responding to the work environment. Moreover, persons characterized as having a high internal locus of control are more likely to attempt to manage and control external environments (Andrisiani & Nestel, 1976; Du Cette & Wolk, 1978; Sampson, 1978). Finally, internals generally report lower levels of role ambiguity than externally oriented individuals (Organ & Greene, 1974; Sims, Szilagyi, & Keller, 1976). Thus, it appears likely that internals would tend to initiate more communication with the leader in order to reduce ambiguity and to control the environment. Similar relationships appear probable for persons reporting high needs for achievement or dominance (cf. Schmitt, Coyle, White, & Rauschenberger, 1978; Steers & Braunstein, 1976).

The foregoing discussion suggests that the point from which superior-subordinate communication is initiated may be as important as the frequency with which such information exchange occurs. The present study explores potential relationships between the source of initiation of communication and performance and satisfaction. Hypothesized relationships are described in greater detail below.

Proposed model. Based on the existing literature, it appeared possible to postulate several influences on the level of leader-versus-subordinate-initiated communication patterns as well as probable outcomes associated with these patterns (see Figure 1).

Insert Figure 1 about here.

The model generally postulated that leader behaviors, including leader initiated communication, exert influences on individual attitudes and behavior via influences on the job. This perspective was guided by a growing body of research suggesting that more distal influences tend to be felt primarily in terms of effects on more proximal events (Hensen & Muchinsky, 1978, Indik, 1968; Jessor & Jessor, 1973; Jones & James, 1979). Further, leader behaviors were considered as exogeneous variables because the leader was viewed as a kind of summary influence (cf. Adams, Laker, & Hulin, 1976) or key link to the majority of the more macro level organizational characteristics and events (Carroll & Tosi, 1973; Quick, 1979). Further, and for reasons discussed later, relationships are presented in the form of a recursive model that focuses on perceived communication patterns and job characteristics. As noted by Mayes (1978), most models of motivation or performance assume that

what is perceived plays a more salient role in guiding behavior than what is not perceived. Further, as Epstein noted, the environments that individuals experience evidence some stability but "apparently less than their emotional and behavioral responses to these environments" (1979, p. 651).

In general, the model postulates that Leader Initiated Communication (X_1) reduces Role Ambiguity (X_4) both directly and indirectly through increases in Structuring Activities (X_5). Because leader behaviors tend to be task oriented, it was assumed that more frequent leader-initiated communication would be viewed as increasing structure as well as directly supplying information needed to clarify the individual's role in the organization. It was also hypothesized that subordinate Participation (X_3) in the decision-making process reduces role ambiguity because such participation allows a clearer articulation of individual roles and increases superior-subordinate concensus regarding the role (cf. Quick, 1979). It was also expected that participation would encourage a freer, more open relationship between superiors and subordinates that would in turn lead to greater Confidence and Trust in the Superior (X_5) (Jablin, 1979). Additionally, it was assumed that participation would increase levels of motivation Extra Effort (X_{12}) because studies have shown that participation leads to greater acceptance of goals, and often to more difficult goals, thus increasing individual efforts to achieve those goals (Quick, 1979; Yukl & Latham, 1978). A direct relationship was also postulated between participation and Performance (X_{13}), in part because of the expectation that participation would lead to a clearer understanding of the nature of job performance.

It was hypothesized further that high levels of role ambiguity would

lead to increased subordinate Self-Initiated Communication (X_8) as the individual tries to obtain clarification of role expectancies from the supervisor. As discussed earlier, this tendency for the individual to attempt to exert greater control over the environment through the active seeking of information is expected to vary as a function of the individual's Internal Locus of Control (X_6) and Need for Dominance (X_7).

It was also hypothesized that increased subordinate initiated communication would result in a greater perceived ability to influence the superior, that is, greater Psychological Influence (X_8) which will in turn increase satisfaction directly as well as indirectly through perceptions of greater superior Confidence in the Subordinate (X_{10}). Consistent with Umstot, Mitchell, & Bell (1976), it was postulated that any effects that satisfaction might exert on performance would be via influences on motivation although this relationship was expected to be weak.

Analyses

Path analytic techniques (Duncan, 1966; Heise, 1969) were used to test the model presented in Figure 1. Briefly summarized, path analysis describes a particular application of structural analyses that employs standardized variables, assumes a recursive model (i.e., that causal directions are basically understood and in a state of equilibrium for the period observed), assumes that the disturbance terms of dependent variables are uncorrelated with each other and with the disturbance terms of independent variables, assumes perfect or extremely high reliability of measurement, and requires explicit theoretical statements about the network of hypothesized causal relationships. As noted by Griffin (1977) and others (Heise, 1967; Namboodiri, Carter, & Blalock, 1975), it is precisely this requirement for exact theoretical statements that gives structural modelling its strength.

The present study assumed a recursive model for several reasons. First, supervisor assessments were obtained approximately 4 weeks after the perceptual responses thus rendering reciprocal causation unlikely.[1] Second, the model was based on a linkage model of behavior (James & Jones, 1976; Jones & James, 1979) where the more distal aspects of the organization (e.g., leader behavior) were viewed as probable causes of more proximal aspects (e.g., perceptions of role and individual behaviors). Finally, while reciprocal effects were expected for some of the relationships (e.g., subordinate performance to leader behavior) it was felt that these effects were neither instantaneous nor was the appropriate lag reflected in the present data.

Path coefficients are simply standardized regression coefficients (β weights) that allow one to test certain assumptions of a clearly stated theoretical model. The appropriate weights are obtained by first specifying the structural equations that correspond to the causal system hypothesized in Figure 1. These equations are as follows:

(1) $X_2 = \beta_{21} X_1 + \mu_2$

(2) $X_4 = \beta_{41} X_1 + \beta_{42} X_2 + \beta_{43} X_3 + \mu_4$

(3) $X_5 = \beta_{53} X_3 + \mu_5$

(4) $X_8 = \beta_{84} X_4 + \beta_{86} X_6 + \beta_{87} X_7 + \mu_8$

(5) $X_9 = \beta_{98} X_8 + \mu_9$

(6) $X_{10} = \beta_{109} X_9 + \mu_{10}$

(7) $X_{11} = \beta_{114} X_4 + \beta_{115} X_5 + \beta_{119} X_9 + \beta_{1110} X_{10} + \mu_{11}$

(8) $X_{12} = \beta_{123} X_3 + \beta_{1211} X_{11} + \mu_{12}$

(9) $X_{13} = \beta_{133} X_3 + \beta_{1312} X_{12} + \mu_{13}$

where X_1, X_3, X_6, and X_7 are assumed to be exogenous variables with causes outside the postulated system, where the β's represent postulated causal pathways, and the μ's are disturbance terms that reflect all variations in an endogenous variable not attributable to the measured causes. Finally, all pathways not specified above are assumed to be zero (normally less than $\pm$ .10). To solve for the appropriate path coefficients, one merely regresses X_2 on X_1, X_4 on X_1, X_2 and X_3, and so forth. Causal pathways may then be tested in terms of significance and direction of relationship.

Method

Sample

The sample consisted of military and civilian members of five U.S. Navy outpatient health care clinics. Respondents (n = 184) included vocational nurses, pharmacists, x-ray and laboratory technicians, and middle-to-lower level administrative and clerical personnel. Physicians, registered nurses, and senior level administrative personnel were not included in the present study because of very small numbers per facility. Military hospital corpsmen were represented in virtually all job types, while civilians were found primarily in vocational nursing, occupational health and clerical positions. The sample was approximately 70% male (n = 128) and 30% female (n = 56). Average paygrade for the sample was GS-5 for civilian employees and E-4 for military. Average time in the organization was 1.9 years. Respondents represented 69% of those eligible.

Measures

Demographic measures. Age, paygrade, job title, and tenure were obtained from self-report data and from organizational rosters. Civilian paygrade (represented by a GS level and within-grade step) was made equivalent

to military paygrades (E1 through E9). This step was accomplished by asking immediate supervisors what rank and type of military training would be required to fill that position at the level of the present incumbent, by asking supervisors to designate military personnel performing similar jobs, and by comparing position descriptions.

Leader behavior and work environment measures. The majority of the perceived work environment and leader behavior measures were obtained from the psychological climate questionnaire developed by Jones and James (1979). Role Ambiguity (cf. House & Rizzo, 1972) was a 10-item composite (α = .79) that reflected the degree to which the individual felt that job responsibilities, expectations of other workgroup members, task assignments, decision-making authority, and information or communication networks were unclear or poorly defined. Other questions addressed the clarity of workgroup goals, standards of performance evaluation, and accuracy of information about administrative policies and procedures. Structuring Behavior of the leader (α = .79) was assessed by combining a 5-item measure of Goal Emphasis with a 6-item measure of Work Facilitation (cf. Bowers & Seashore, 1965; Taylor, 1971). The former measure reflected the degree to which the immediate supervisor was seen as setting an example by working hard, encouraging people to give their best efforts, emphasizing high standards of performance, stressing the importance of work goals, and setting specific goals. The latter measure reflected the degree to which the immediate supervisor encouraged subordinates to think and act for themselves and to offer new ideas for job related problems. Other questions addressed the degree to which the supervisor delegated authority, showed individuals how to improve performance, helped to schedule work, and obtained needed supplies and information.

Other leader-oriented measures reflected Psychological Influence, Participation in Decision-Making, confidence in the leader (Confidence-Up), and confidence of the leader in the subordinate (Confidence-Down). Psychological Influence (James, Gent, Hater, & Coray, 1979; Vroom 1960) assessed the individual's perceived ability to influence the immediate supervisor. This measure (α = .88) contained 6 items addressing the degree to which the supervisor paid attention to suggestions from the subordinate, and was approachable and willing to listen to the problems of the subordinate. Participation in Decision-Making (cf. Vroom & Jago, 1978) was a 4 item measure (α = .59) reflecting the degree to which the leader elicited subordinate involvement in solving work problems and consulting with the subordinate before designating or changing work duties and assignments. Confidence-Up (α = .79) and Confidence-Down (α = .70) were expanded versions of the measures reported by Jones, James and Bruni (1975). The former was a 7-item composite containing questions about the degree to which the supervisor was a trustworthy source of technical expertise, job related information and straight answers. Negatively scored items reflected the degree to which the supervisor was viewed as blaming subordinates for his/her own errors or taking sole credit for the work of subordinates. Confidence-Down was a 4-item measure reflecting the degree to which the supervisor trusted subordinate reports, judgment and work behavior as well as generally treating subordinates with respect.

Communication measures. Communication patterns were measured by twelve items designed to tap the typology of communication networks presented by Greenbaum (1974). As noted by Schuler and Blank (1976) this typology appears

to encompass (and perhaps extend) those suggested by Roberts and O'Reilly (1974a, b). The four types were Regulative Communication which emphasizes conformity to task-related plans, orders, and controls; Innovative Communication which addresses problem solving, adapting to a changing environment, and interpretation of the environment; Integrative Communication which reflects maintenance oriented communication and the needs and feelings of employees; and Informative-Instructive Communication which is concerned with the correct information, training, adaptability, and so forth needed to facilitate goal attainment and task completion. These questions were presented in a form similar to that employed in the JDS (Hackman & Oldham, 1975). A brief written description of each type was presented and the individual was asked to indicate on separate 5-point scales (none, 1, 2, 3, 4, 5, a large amount) the amount of that type of information initiated by (a) self, (b) superiors, and (c) subordinates. In spite of attempts to differentiate responses in terms of types of information, the responses for each source were more highly intercorrelated (average $\underline{r}$ = .53) than were responses by type (average $\underline{r}$ = .24). Thus, items were recombined to represent the source of communication (e.g., Leader-Initiated Communication, 4 items, α = .80; Self-initiated Communication, 4 items, α = .84; and Subordinate-Initiated Communication, 4 items, α = .82). Because the majority of the present sample had no subordinates, the last scale was dropped from further analysis.

Individual difference measures. Measures of individual differences reflected internal locus of control and need for dominance. Internal Locus of Control (α = .62) was measured by seven of the eight items developed by Levenson (1974). The item reflecting personal control over friendships

was not correlated with the remaining seven and was dropped to improve scale reliability. The retained items reflected the degree to which the individual felt that having an accident, carrying out plans, getting to be a leader, protecting personal interests, controlling one's life, and other such events were a function of that individual's ability and effort or were under his or her own control. Need for Dominance (α = .77) was a 5-item scale developed by Steers and Braunstein (1976) and reflected the individual's self-reported efforts to seek leadership roles, organize and direct the activities of others or otherwise influence the behavior of other persons.

Job satisfaction. Job Satisfaction (α = .92) was measured by 20 items asking the individual to rate his or her level of satisfaction (1 = very dissatisfied to 5 = very satisfied) in regard to a variety of job characteristics (e.g., amount of time kept busy, amount of time spent working alone, opportunity to do different things, chances to use abilities, chance to use own methods) leader behavior (e.g., competence of my leader, the way my immediate supervisor handles subordinates) recognition and reward opportunities (e.g., pay for the work I do, prestige of my job, chances for advancement, recognition for doing a good job) and organizational policies (e.g., stability of the career, the way Navy policies are put into practice).

Motivation. Assessments of motivation were obtained from ratings by the immediate supervisor. Based on interviews with a variety of health care professionals, six items were constructed that reflected behaviors requiring the expenditure of additional effort (cf. Jones & Butler, Note 1 for a more detailed presentation). These statements included such behaviors as putting in extra time to catch up on record keeping when the load was heavy, offering assistance to coworkers who were behind in their own work, leaving at the end

of the work day regardless of whether or not the work was finished (reverse scored), and working voluntarily at unassigned jobs to learn new techniques and procedures. Each individual's supervisor was asked to indicate on a 5-point scale (1 = not likely at all to 5 = highly likely) how likely it was that the rated individual would perform each behavior. The expectation format was used rather than actual ratings of observed behavior because minor variations in job or workload might have made it difficult for raters to observe all behaviors equally, thus leading to spuriously uneven scores.

Performance. Performance marks were obtained by using eight of the 10 routine formal quarterly marks for military personnel. Two of the 10 statements described strictly military behaviors and were excluded from further analyses. Similar ratings were obtained from the supervisors of civilian personnel. Seven of the items reflected demonstrated technical competence, work output, individual contribution to group effort, accomplishing work under changing conditions, carrying out tasks without direct supervision or monitoring, promoting harmonious working relationships and team effort, and promoting good patient relationships. All items were scored on a 5-point scale (1 = stands out from virtually all others, 2 = superior to most, 3 = typical of most, 4 = good, 5 = unsatisfactory). The scores were reversed so that a higher score reflected higher performance, then summed. The average intercorrelation among the items was .73. The eighth item, an overall performance rating, correlated .92 with the 7-item composite and was not used further. For 128 of the respondents, the individual who completed the quarterly performance ratings also filled out the ratings of extra effort. For the remaining individuals (n = 55), the effort appraisals were completed by the immediate supervisor while the formal marks were completed by a more senior individual.

No differences were observed in item means or variance, or in correlations among the items, between the two sets of ratings or with other domains as a function of same or different raters.

Results

Table 1 shows the zero-order correlations among all the exogeneous and endogenous variables presented in Figure 1. Also included are correlations with paygrade. With one exception, these relationships appeared consistent with the postulated model. In other words, the correlations were significant and in the hypothesized directions. The exception was the relationship between Role Ambiguity (X_4) and Self Initiated Communication (X_8). This correlation was significant but negative rather than positive as expected.

Insert Tables 1 & 2 about here

The viability of the proposed model was tested further by calculating the standardized regression coefficients contained in the path equations presented earlier. As seen in Table 2, these computations suggested several inadequacies in the postulated model. First was the additional evidence that the relationship between role ambiguity and self initiated communication (β_{84}) was negative rather than positive. Second was the lack of empirical support for the postulated pathways between internality and self initiated communication (β_{86}), self initiated communication and psychological influence (β_{98}), job satisfaction and subordinate confidence in the superior (β_{115}), satisfaction and superior confidence in the subordinate (β_{1110}), effort and job satisfaction (β_{1211}), and finally, between participation and performance (β_{133}).

The need for model revision was further underscored by additional

goodness of fit tests which explored the possibility of additional pathways among the variables. These alternative pathways were explored by regressing each endogenous variable against all variables with a lower subscript, then determining the minimum subset of measures that would reproduce the multiple R. The revised model suggested by this technique is shown in Figure 2.

Insert Figure 2 about here

The primary additional pathways suggested by this method were those between structuring behavior and confidence in the leader (β_{52} = .48), confidence and ambiguity (β_{45} = -.20), confidence and self initiated communication (β_{85} = -.20), self initiated and leader initiated communication (β_{81} = .24), self initiated communication and perceived supervisor confidence in the subordinate (β_{108} = -.13), role ambiguity and psychological influence (β_{94} = -.66), and perceived confidence and motivation (β_{1210} = .23).

A final set of analyses addressed the possibility that the entire pattern of results reflected positional differences due to differences in paygrade. To test this possibility, paygrade was entered as an additional predictor in each of the regression equations described above. These analyses revealed two points. First, paygrade contributed significantly to the prediction of virtually all the endogenous variables in the model. Second, this contribution was essentially independent of the pathways contained in the revised model presented in Figure 2. None of the pathways could be omitted and still reproduce the same level of prediction (R^2). Further, the reduction in the magnitude of the standardized regression coefficents brought about by the inclusion of paygrade was minimal (generally less than .04).

Discussion

A recursive model of superior-subordinate communication was postulated whereby leader initiated communication exerted influences on various role and job characteristics such as ambiguity which in conjunction with individual factors determined the level or amount of upward communication initiated by the subordinate. It was argued that this upward directed communication would be a primary factor in determining the subordinate's perceived relationship with that superior (at least in terms of shared confidence and influence). Further, it was postulated that these communication patterns would at least indirectly influence motivation and performance. Finally, it was argued that subordinate participation in decision-making would influence superior-subordinate initiation of communication. Participation was also expected to influence motivation and performance.

Several aspects of this model were supported. As expected, leader-initiated communication was related to reduced ambiguity both directly and via increased structuring. This pattern is consistent with previous findings that supervisors tend to initiate production, task-oriented and role descriptive information more than social or innovative communication in their dealings with subordinates (Hansen & Muchinsky, 1978; Jablin, 1979). The results also supported the postulated links between participation and reduced ambiguity as well as increased effort and increased confidence in the leader.

These latter findings were similar to patterns suggested by Quick (1979) who argued that participation not only led to greater subordinate acceptance of goals but also to greater superior-subordinate concensus in regard to goals and thus to greater role clarity. At least two other potential relationships are suggested, however. First is the possibility that the greater concensus

resulting from participation causes the superior to revise the basis of his or her performance ratings, thus inflating performance ratings through halo and generally more positive reactions toward the subordinate. While this explanation cannot be entirely ruled out, the findings are not generally indicative of such a relationship. For example, there was no direct pathway between participation and performance nor between performance and superior confidence in the subordinate. Thus, halo does not appear to be a primary factor. The second explanation appears more viable, namely that subordinate participation increases the superior's opportunities to interact with the subordinate and thus to observe the effort and motivation the worker brings to bear on the job. Further, greater concensus regarding role obligations is likely to be accompanied by increased ability on the part of the subordinate to obtain needed or desired resources and assignments from the superior and by higher expectations on the part of the leader. This latter explanation appears consistent with the empirically demonstrated pathways linking participation directly to supervisory ratings of greater exerted effort and indirectly via increased role clarity, greater influence over the supervisor's action and decisions, and greater superior confidence in the subordinate.

Unfortunately, as is often the case, the results were inconsistent with many aspects of the hypothesized model and several revisions seem needed. Two areas especially--job satisfaction and self-initiated communication--appeared to play roles substantially different from those postulated by the model. Perhaps the simpler of the two to address is satisfaction which appears to have potential direct links to only two concepts. Satisfaction was negatively related to role ambiguity and positively related to psychological influence. No relationships were found with motivation and

performance. Such findings are consistent with the growing body of job enlargement studies showing that role characteristics such as ambiguity, challenge, variety and autonomy consistently influence satisfaction while influences on performance are indirect, inconsistent, or non-existent (Umstot, et al., 1976). By the same token, satisfaction has been shown to influence such areas as job involvement (Jones et al., 1975) and retention (La Rocco & Jones, Note 2). Thus, while evidence continues to mount that job satisfaction is not entirely redundant with other job perceptions (James & Jones, in press; Schneider & Snyder, 1974), it appears that considerable future effort will be required before the role of this ever popular concept is fully understood.

The second area demanding change--self-initiated communication--was both more perplexing and inviting of speculation. First, the entire relationship between superior and subordinate initiated communication appeared more complex than was originally postulated. For example, it was originally assumed that more frequent superior initiated communication would have an inhibiting (though indirect) effect on the frequency of subordinate initiated communication and that subordinate initiated communication would be primarily triggered by role ambiguity. This did not appear to be the case. Rather, there was a positive relationship between superior and subordinate initiated communication and a negative relationship between the subordinate's self-initiated communication and role ambiguity. Thus it appeared that the subordinate was more likely to initiate communication or information exchange with the superior if the superior also initiated such an exchange and that it was the total amount of such exchange that led to reduced ambiguity.

This latter explanation appears compatible with the earlier discussion about the possible role played by participation in decision-making in increasing superior-subordinate consensus and reducing ambiguity. Unfortunately, the negative relationships between self-initiated communication and the measures of shared confidence raise serious questions. For example, the present data suggest that leader initiated communication leads (though indirectly) to increased confidence inthe leader but that confidence in the leader reduces both ambiguity and the upward flow of information. Further, it appears that the more often the subordinate initiates the communication exchange the less is the feeling that the superior is confident of the ability of that subordinate. Thus, while the pattern related to the downward flow of communication is consistent with previous studies (cf. Jablin, 1979; O'Reilly, 1977) the pattern associated with the upward flow is not.

Explanations for this latter phenomenon must remain speculative and cautious,[2] but at least one possibility does emerge. The present study addressed individuals in highly trained specialties where technical expertise and individual judgment and skill were primary elements in determining both the nature of the individual's role and ultimately the level of performance. Under such circumstances it is possible that self-initiated communication was caused not by attempts to reduce role ambiguity but rather to reduce shared suspicions between leader and subordinate. In other words, such communication may have represented a form of image management (Goffman, 1959) or an individual attempt to improve the work environment (Johnston, 1974).

Such speculation would be reinforced if shared confidence levels were differentially related to different types of communication. For example, Jablin (1979) cited several studies showing that feedback and communication

connoting a lack of trust in the subordinate lead to dissatisfaction and aggressive feelings while feedback connoting trust promotes satisfaction and more accurate upward communication. Schuler and Blank (1976) also explored the effects of different types of communication. While many of the items used appeared to reflect traditional job and leadership characteristics more than communication patterns, measures reflecting integrative, harmonious communication among workgroup members were positively related to supervisory and peer ratings of performance for a variety of manufacturing positions. Measures reflecting the smooth flow of task-oriented communication were positively related to satisfaction while measures reflecting restrictions in the upward flow of unfavorable information were negatively related. Neither of these latter communication patterns was related to performance. Finally, requirements to report detailed information to superiors were related to neither satisfaction nor performance. Schuler and Blank noted differences by job level where higher level, more complex, interdependent jobs appeared to need and utilize more informative-instructive or task-flow information. Unfortunately, while the present study attempted to address both the source of initiation and the type of information exchanged, the measures used were unequal to the task of discriminating among different types. Thus, testing the above speculative hypotheses must await the development of more refined instruments.

In general, while the present study focused on issues related to the point at which information exchange was initiated, the effects of such initiation on performance were indirect and considerably less than those attributable to participation. In more applied terms, such results suggest that the flow of communication may well have important and far-reaching

consequences for superior-subordinate relationships and job satisfaction but that attempts to increase motivation, productivity, and performance may be more effectively served by direct involvement of subordinates in defining and articulating the demands and goals of their jobs (Latham & Yukl, 1976; Umstot et al, 1976).

A final note of caution is in order. The language of path analyses is causal, but like any other statistical method the strength of causal interpretation relies finally upon the strength of the conceptual models that guided it. Further, any correlational causal technique is unable to specify directional flow in any definitive manner. At best, the technique can demonstrate the potential viability of some linkage networks while showing others to be less tenable. While the present study articulated a specific and somewhat complex model, many of the initial causal assumptions appeared invalid. Thus future investigations will be needed to provide supplemental direct and indirect pathways and to explore alternative models. The findings do suggest, however, that the point at which superior-subordinate communication is initiated may be just as important to our understanding of organizational functioning as is the frequency, type, or utilization of such information.

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1. While expectations of potential ratings of their performance by superiors may have affected subordinate responses, it was felt that this assumption is less parsimonious than assuming a weak or inconsistent reciprocal relationship in the present data.

2. The pathways between both confidence measures (X_5 and X_{10}) and the self-initiated communication measure (X_8) represent suppressor effects, that is, the β weights have signs different from the zero-order correlations. While it is sometimes felt that such effects are uninterpretable, McFatter (1979) suggested that they may be interpretable within the context of a clear structural model.

Table 1

Correlations Among Measures for Health Care Support Personnel

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Paygrade	---													
2. Ldr. Initiated Comm (X_1)	.10	---												
3. Struct. Behavior (X_2)	.09	.53**	---											
4. Participation (X_3)	.23**	.46**	.66**	---										
5. Role Ambiguity (X_4)	-.28**	-.57**	-.66**	-.67**	---									
6. Confidence Up (X_5)	.15*	.45**	.73**	.62**	-.63**	---								
7. Internality (X_6)	.09	.22**	.26**	.15*	-.27**	.26**	---							
8. Need Dominance (X_7)	.31**	.16*	.07	.12	-.14*	.05	.13	---						
9. Self Initiated Comm (X_8)	.12	.38**	.27**	.24**	-.33**	.15*	.16*	.31**	---					
10. Psych. Influence (X_9)	.24**	.45**	.74**	.73**	-.70**	.75**	.25**	.08	.29**	---				
11. Confidence Down (X_{10})	.29**	.27**	.52**	.53**	-.54**	.62**	.18*	.01	.07	.67**	---			
12. Job Satisfaction (X_{11})	.22**	.41**	.54**	.62**	-.65**	.54**	.17*	.02	.25**	.65**	.49**	---		
13. Extra Effort (X_{12})	.29**	.25**	.28**	.45**	-.32**	.21**	.05	.15*	.17*	.30**	.31**	.26**	---	
14. Performance (X_{13})	.42**	.23**	.17*	.35**	-.35**	.20**	.01	.17*	.20**	.31**	.29**	.29**	.62**	---

Note: $\underline{N}$ = 184

* $p < .05$

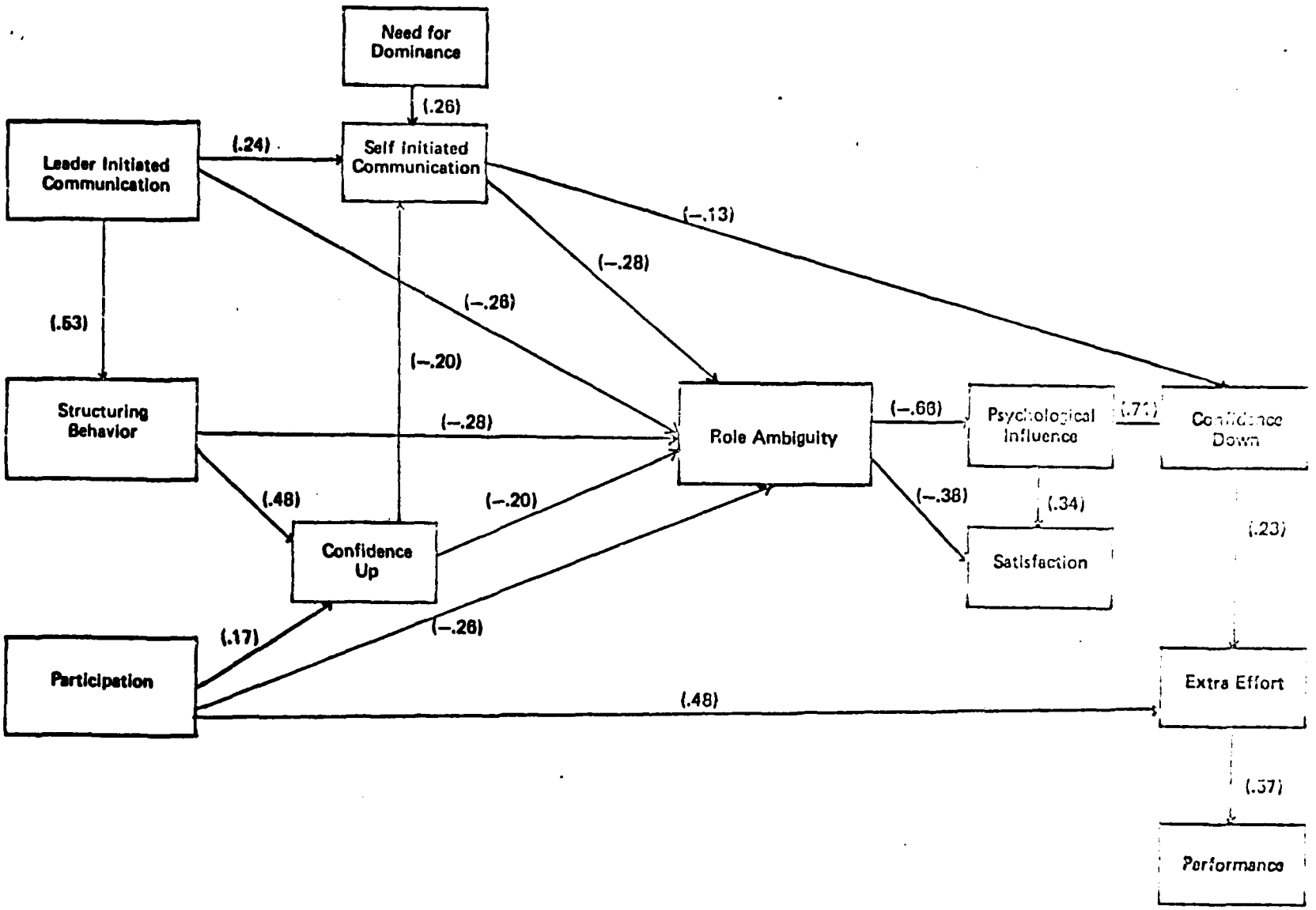
** $p < .01$

Table 2

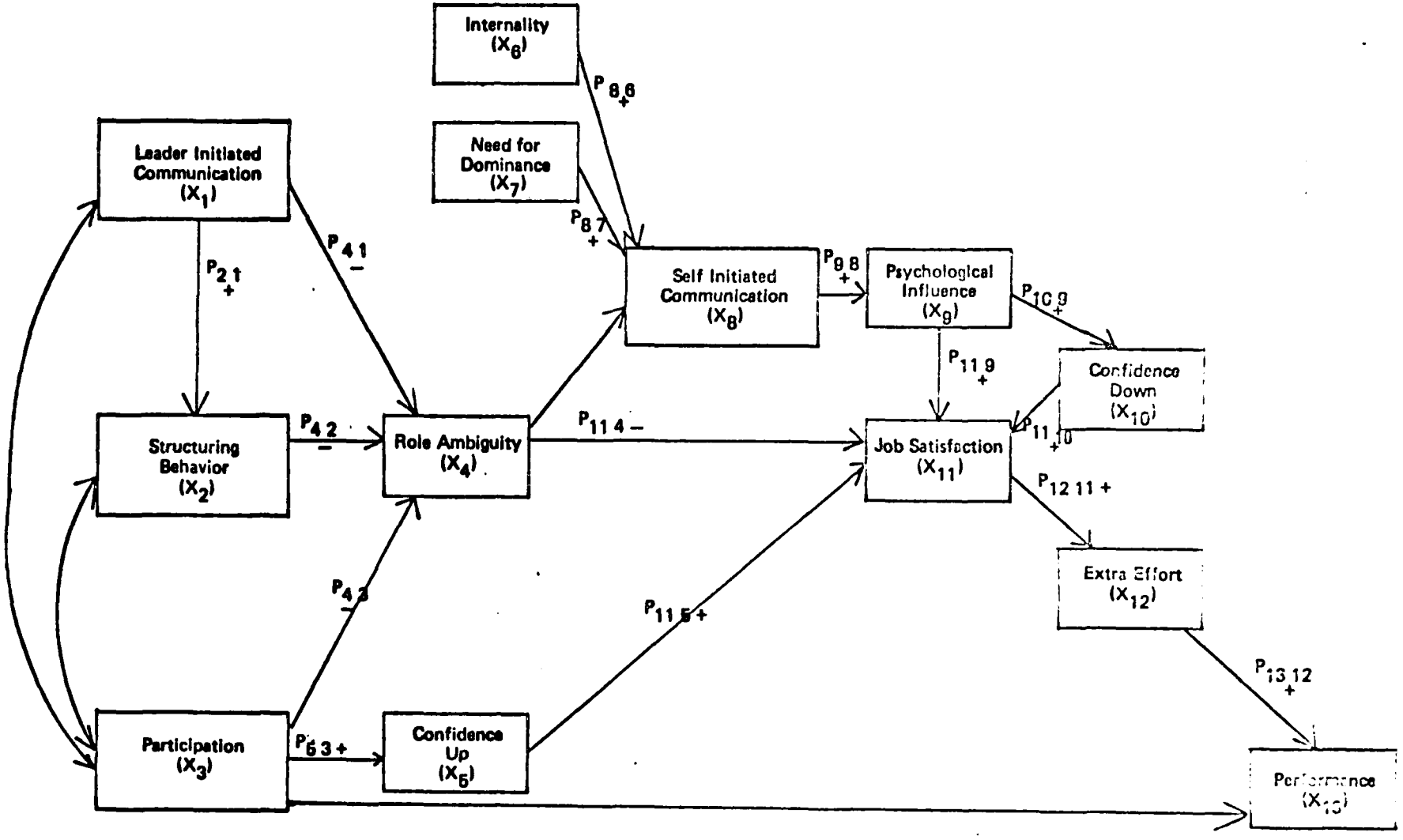
Comparison of Hypothesized and Empirical Path Coefficients Based on Model

Path Coefficient	Hypothesized	Empirical	Path Coefficient	Hypothesized	Empirical
β_{21}	+	.53	β_{109}	+	.71
β_{41}	-	-.26	β_{114}	-	-.38
β_{42}	-	-.28	β_{115}	+	.01
β_{43}	-	-.36	β_{119}	+	.34
β_{53}	+	.17	β_{1110}	+	.06
β_{84}	+	-.28	β_{123}	+	.48
β_{86}	+	.05	β_{1211}	+	.03
β_{87}	+	.26	β_{133}	+	.05
β_{98}	+	.07	β_{1312}	+	.57

n = 184



REVISED MODEL SUGGESTED BY RESULTS OF PATH ANALYSIS



HYPOTHESIZED DIRECTION OF INFLUENCES ON INDIVIDUAL PERFORMANCE

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Superior-subordinate communication patterns have been shown to influence subordinate satisfaction and performance. The present study of 184 military and civilian health care support personnel in five outpatient care facilities explored the potential importance of the point of initiation of leader-subordinate communication. Job and individual factors which affected this flow also were explored. A recursive model was developed to suggest probable causal paths. When tested by path analyses, certain revisions to the model appeared to be necessary. In general, leader-initiated and self-initiated

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communication appeared to reflect attempts to reduce role ambiguity and to exert only indirect influences on motivation and performance. Individual participation in decision-making, on the other hand, exerted the strongest influence on performance (via motivation) and also reduced ambiguity.